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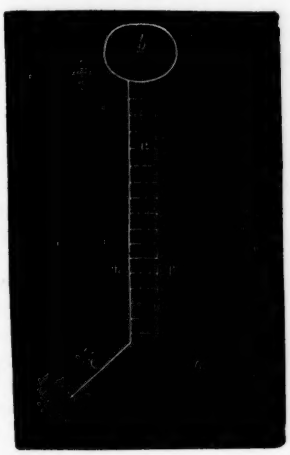
ORIGINAL LECTURES.

ON THE ACTION OF DRUGS UPON THE MOTOR SYSTEM OF ANIMALS.

BY PROF. H. C. WOOD.

Delivered at the University of Pennsylvania, December 20, 1876.

THE object of to-day's lecture is to familiarize you with the general principles involved in the study of the action of drugs upon the motor system, and with methods of investigation rather than with facts in regard to the influence of individual agents. In starting it is necessary to get a clear idea of the plan, so to speak, of the nervous system. Although we are not in a position fully to elaborate this plan from anatomical and purely physiological investigations, yet the data obtained by the scalpel of the anatomist, pathologist, and physiologist, with the well-established facts of experimental therapeutics, suffice to show us that the general arrangement is such as I am about to detail to you. I have drawn on the blackboard—to represent my idea—the accompanying diagram: above, the



cerebrum (*b*); below, the spinal cord (*c*); at the sides the nerves (*a*, *e*) and the muscle (*x*). The cord, for our purposes to-day, may be looked upon as a double organ: the dotted line (*r*) representing the receptive portion, the uninterrupted line (*m*) the impulse-giving portion: running across from these two parts, everywhere binding them together, you must remember, are commissures. From the circumference of the body to the receptive portion of the cord run nerves (*a*), which are the afferent or sensory nerves, whilst from the motor portion of the cord pass the nerves to all parts of the body,—the so-called efferent or motor nerves (*e*). Now, let us suppose an irritation to be applied to the afferent nerve (*a*); it sets in motion a vibration, or a something,—an influence, if you choose,—which travels along the nerve. For the sake of brevity and clearness, let us waive all theory as to the nature of this, and speak of it simply as an impulse. This impulse, then, starting at the periphery, travels up the afferent nerve to the receptive spinal tract, and then passes up to the brain, or across to the motor tract of the cord. If it do the former of these actions, it gives origin to a sensation; if the latter, to an impulse from the motor cells, which passes down the efferent nerve (*e*), and manifests itself by contractions of the muscle (*x*); the movements which result being reflex actions. The brain itself originates the impulse which is to be converted into voluntary motion; this impulse travels down the motor tract (*m*), and finally out through the efferent nerve (*e*) to the muscle (*x*). In all probability, however, the impulse does not pass directly from the brain. It probably acts upon the centre or cell which presides over the individual muscle, causing it to generate the impulse which goes directly along the nerve to the muscle concerned. It is very probably the same cell which sends forth the final motor impulse to the muscle, acting precisely in the same manner, whether it be provoked by an impulse transmitted from the receptive centre of the cord, and thereby produces a reflex movement, or whether it be provoked by an impulse from the brain, and thereby causes a voluntary movement. It is plain that a drug may arrest or put an end to reflex actions by paralyzing the afferent nerve (*a*), the receptive part of the cord (*r*), the motor spinal tract (*m*), the efferent nerve (*e*), or the muscle (*x*). Now, if we administer to a frog a dose of bromide of potassium of the proper size, there is produced a condition of complete loss of reflex activity; nevertheless, if you watch the flaccid frog, whose feet you can destroy by acid or flame without producing a quiver, you will be startled by

seeing him make great leaps through the air. And if you place him on his back he will scramble round to his normal position, guided apparently by his eyesight. What does this prove? Evidently, that the motor tract from the cerebrum to the muscle preserves its function, that the pathway from the brain along the uninterrupted line (*m*, motor spinal tract; *e*, efferent nerve) is not blocked up. Chloral, like the bromide, paralyzes the reflex action; but you see in this rabbit how differently it acts from the bromide. The animal lies sprawling, nearly paralyzed, reflex activity almost abolished. You hear, as I simply pinch the ear with my finger, how the animal squeals. Now, the rabbit is a dumb beast, and only cries under severe pain or during excessive fright. This rabbit is not frightened, and the amount of pain inflicted would be unnoticed by the normal animal. Evidently you have here marked hyperæsthesia; evidently chloral produces increased sensibility with lessened reflex action. It is very plain that the pathway of the dotted line up along the sensory nerve to the receptive centre of the cord, and along the receptive centre to the brain, is not blocked up: consequently the chloral reflex palsy must originate either in the motor tract of the cord, in the nerve, or in the muscle. Now, if we apply the poles of our battery to the sciatic nerve of the frog poisoned with chloral, we get very active contractions in the tributary muscles, showing that the nerve and muscles are intact and that the block is in the motor tract of the cord itself (*m*). You can now readily see why in the rabbit before you, poisoned with chloral, voluntary motion is lost as well as reflex activity: the portion of the cord employed by both processes is compromitted by the drug.

Again, let us take the nitrite of amyl; it lessens reflex action but does not produce any apparent loss of sensation. It does not block up the pathway along the interrupted line,—the afferent nerve and the receptive part of the cord. When you tie the artery of the frog's hind leg, and thereby prevent the access of the poison to the nerve-trunk, the paralysis produced by the nitrite still develops equally in the legs. When you galvanize the motor trunks in the dead frog, the muscles respond. Evidently the nitrite of amyl diminishes reflex activity by an influence upon the motor tract of the cord.

Let us now go back to the bromide of potassium, which of the three remedies is the only one we have found to act upon the sensory tract (represented by the dotted line). Is it the peripheral afferent nerve (*a*) or the receptive tract of the spinal cord (*r*) which is attacked? Unfortunately, we are not here absolutely sure of our evidence. I have not myself experimented, but at least four observers state that when in the frog the artery of a limb is tied so that none of the poison can reach the afferent nerve (*a*), the paralysis of reflex action is produced as rapidly as usual by the drug. If this be correct, it is plain that the bromide of potassium causes reflex palsy by paralyzing the receptive centres of the cord. Damourette and Pelvette assert, however, that under the experimental circumstances just spoken of the protected limb does not lose its power of originating reflex movements as rapidly as do the other limbs. They further assert that there is a stage when galvanization of an afferent nerve-trunk produces reflex movements although the same stimulus applied to the skin is powerless. Evidently, if their experimental results be correct, the bromide acts especially upon the peripheral nerves. The great value of the bromide of potassium in tetanus and strychnia-poisoning would, however, seem to indicate a spinal influence; and I am inclined, therefore, to believe in the correctness of the experimental results reached by the German investigators, Eulenburg, Gutmann, and Lewisky, the American, Roberts Bartholow, the Irishman, Purser, and the Frenchman, Laborde, rather than in those arrived at by Damourette and Pelvette, and to believe that bromide of potassium acts chiefly upon the receptive spinal centres.

The alkaloid conia produces, like nitrite of amyl, a palsy of both reflex action and of voluntary movement. This shows that by it the motor tract, the uninterrupted line of our diagram, is affected. It is very easy to show that of this motor tract the efferent nerve is paralyzed. All that is necessary is to apply to a muscle of the frog dead of conia a mild galvanic current, and subsequently to the nerve itself the same current: under these circumstances it will be found that the muscle contracts when stimulated directly, but that the current avails nothing when applied to the nerve-trunk. Conia, therefore, paralyzes the nerve-trunks. Of course it may also para-

lyze the motor tract of the cord. An experiment, however, of the French observers MM. Pelvette and Damourette, indicates very strongly that the conia does not paralyze either the efferent nerve (*e*), the receptive centre (*r*), or the motor tract (*m*). The observers just mentioned so divided the tissues and secured the vessels of a limb that none of the poison could reach the efferent nerve (*e*). The alkaloid having been given, palsy ensued in every member except that supplied by the efferent nerve (*e*). Remember, the afferent nerve (*a*) was reached by the poison, but, nevertheless, irritation of its periphery produced reflex actions in the limb supplied by the protected efferent nerve (*e*), but nowhere else. The afferent nerve and the spinal cord must, therefore, have been intact. Again, these observers gave to a frog prepared as before, strychnia and conia simultaneously; everywhere throughout the batrachian reigned the most profound quiet, save in the leg supplied by the protected nerve; this was violently convulsed. The conia reached the spinal cord, but did not paralyze it so as to interfere with the exciting action of the strychnia, although it did so benumb the motor nerve-trunks as to prevent them from carrying the convulsive impulses from the cord to the muscle.

The principles which I have thus briefly endeavored to portray to you apply to convulsive agents as well as to paralyzants. Our hour has, however, so nearly expired that I cannot enter upon this branch of the subject. Let me say one word to show that what we have been speaking of has not a merely theoretical interest. Take the case of strychnia. Having found that the alkaloid causes convulsions by acting upon the spinal cord, the question suggests itself, Is it the receptive centre (*r*) or is it the motor tract (*m*) which is affected? The answering of this question is something more, I repeat, than a mere refinement of physiology. If we could prove that the receptive portion of the cord receives the stimulation of the poison, we would know that the bromide of potassium is the antidote; but if the strychnia acts upon the motor tract, then chloral would be preferable in poisoning by it. If once we can get at the mode of origin of the strychnic convulsion and its proper treatment, we can hope that ere long tetanus and its scientific treatment will be well understood.

ORIGINAL COMMUNICATIONS.

REPORT OF A CASE OF INTRA-MURAL UTERINE TUMOR, RESULTING IN ABSCESS, WHICH EFFECTED A CURE.

BY J. L. SUESSEROTT, M.D.

Read before the Franklin County Medical Society, January 2, 1877.

SOME time about the latter part of March of last year (1876) I was consulted by Mrs. M. W., æt. 43 years, in regard to her condition. She suspected that she was *enceinte*, but the evidences were entirely unlike those of a former pregnancy. From the shape of her abdomen, which was pyriform, with the apex at the umbilicus, and her sensations as described to me, a suspicion was aroused that I had a case of ventral pregnancy to deal with. I did not make a vaginal examination, but promised to do so when the surrounding circumstances, which were then not suited, would permit. This intention was not carried out, and on the 5th of September I was called to attend her in labor.

I found her having pains, but totally unlike any I had ever witnessed in a case of obstetrics. Whilst they were somewhat rhythmical, they were not in the least tenesmic, and were much more feeble than we generally observe during the first stage of labor. These manifestations, although unlike true uterine contractions, were still *too* much like them to satisfy me that all of the pressure was caused by contraction of the abdominal muscles, or that it was the simulated labor said to exist about the ninth month in cases of abdominal pregnancy; but my mind was still impressed with my former fear, which was not at all quieted on my attempting to find the os uteri. On introducing my finger into the vagina, I found the pelvic cavity filled up with something that was outside of the vaginal walls, and that entirely precluded the possibility of my reaching the entrance into the womb. When my thoughts would be occupied with the idea of an extra-uterine pregnancy, I would be immediately met with the fact that the woman had completed the full term of gestation without accident; but how to explain the condition of things without that hypothesis, I was unable.

Fearing that any rude exploration or extensive investigation might result in the rupture of the membranes, if these were

without the uterus, and speedy collapse of the patient, I concluded to send for assistance, and without further delay I dispatched a messenger for Dr. S. G. Lane, requesting him to come prepared to encounter a case that might require Cæsarean section. In due time the doctor arrived *cap-a-pie*, and, upon making an examination, appeared to be as much perplexed as I had been. After some little discussion of the situation, he proposed that he would lift the entire abdominal mass up towards the chest, after the patient had been fully anæsthetized, and that I should make an extended examination through the vagina.

With considerable effort he was enabled to free the pelvic cavity so far as to allow my right hand to pass above the umbilical line, where, much to my gratification and relief, I encountered the protruding bag of waters, from an os pointing towards the heart, sufficiently dilatable to warrant immediate delivery, if possible. Having ruptured the membranes, and securing the right foot, it being the first that was reached, I succeeded in bringing into the world a very large and healthy boy. Dr. L. immediately remarked, "Here is another one;" but on placing my hand over the abdomen I was satisfied that instead of it being a child it was the object that had filled up the pelvis, had almost inverted the uterus, and had been the cause of all of our trouble. The placenta, which was perfectly normal in size and character, was removed without any difficulty, and upon causing the womb to contract we could distinctly feel a well-defined tumor within the left and front wall of that organ, and had to content ourselves with waiting for further developments.

On the second day after delivery I found the patient suffering from a high degree of peritoneal inflammation, which I combated with the external use of spt. terebinth. and the internal administration of veratrum viride, ergot, and quinine. Her condition was a precarious one for four or five days, intense soreness continuing in the tumor for even a longer time; but at the end of eight or ten days, with the exception of the abdominal burden, she was in a tolerably safe condition.

About this time I intrusted her to the care of Dr. L., during the period of a visit that I contemplated making to Philadelphia, expecting immediately on my return to commence a series of injections of ext. of ergot, with the hope of reducing or possibly removing the abnormal growth. Having remained away longer than at first expected, and the patient having convalesced to that degree as no longer to require the attention of Dr. L., on my next visit, about four weeks after the accouchement, I found her with scarcely a vestige of the tumor remaining. Suppuration and rupture had ensued, discharge per vaginam had followed, and almost the entire mass had disappeared. She informed me that on the second day after Dr. L.'s last visit she was seized with a severe rigor, which was soon followed by a very profuse discharge of an exceedingly offensive fluid from her vagina, which had continued, in decreasing quantities, up to the time of my visit; and at a subsequent visit, on the 26th of December, when I found her and her child in robust health, I learned that this very disgusting sanguino-purulent discharge had continued until about the first of that month, when it ceased entirely, and that in about a week after she had a return of her menstrual flow, natural in quality and very liberal in quantity. At this visit an examination was made for the purpose of discovering, if possible, any vestiges of the former growth, but they had all disappeared, leaving her with the prospect of continued good health.

Dr. L. subscribed to my opinion that the violence which was unavoidable in order to extricate the child had induced sufficient inflammation in the tumor to favor the production of an abscess which had proved so fortunate a means of cure.*

That such a termination of these undesirable cases is possible is a fact well worth remembering, and the method of exploring the abdominal cavity, as suggested by Dr. L., ought not to be forgotten, for, without some such procedure, with the aid of a competent assistant, the accoucheur, no matter how expert professionally and able physically, would be entirely powerless to effect delivery, unless the face-and-knee position was assumed by the patient, which, in cases similar to the one under consideration, I fear would be of little avail.

* A medical friend has suggested that the uterine contractions may have so effectually cut off blood-supply as to favor the softening and disintegration of the tumor; but the fact that no change was noticed in its density until the discharge occurred would substantiate the idea that suppuration set in remote from its periphery, and that when the emptying-out took place it was by a sudden rupture of the walls. The arrested supply of blood would rather have favored gradual atrophy, or, if entirely occluded, would have resulted in softening and sloughing of the entire mass.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. T. G. MORTON.

Reported by STACY B. COLLINS, M.D.

(Continued from November 11, 1876.)

RICHARD P., the subject of paracentesis thoracis mentioned in my last report (Case III.), left the hospital in September,—too early for his own good. In October I saw him once, when his condition seemed critical. He was much emaciated, had a severe cough, and a profuse purulent discharge from the opening made by the bistoury. His whole side was tympanitic on percussion, and the left lung perfectly useless. There is no doubt that this state of affairs was partly due to exposure to cold, poor food, and improper surroundings. On November 18 he was seen by Dr. Morton, when his condition had decidedly improved, discharge had lessened, and he was gaining flesh.

IV.—TRANSVERSE FRACTURE OF PATELLA; USE OF MALGAIGNE'S HOOKS.

Bridget S., æt. 29, married, a washerwoman, was admitted September 28, 1876, with a transverse fracture of the right patella, caused by striking it on the edge of a step in falling.

Treatment.—The leg was elevated on an inclined plane, and lead-water and laudanum applied to subdue swelling. On October 7, after etherization, Malgaigne's hooks were adjusted by Dr. Morton and the fragments brought into close contact. The leg was still extended on the plane, morphia exhibited, and charpie soaked in carbolized oil of the strength of sixteen parts of olive oil to one part of carbolic acid was applied.

There was some pain during the first night, but from this time the condition of the patient steadily improved. There was no heat, swelling, or marked redness about the limb, and she was free from pain, with good appetite, and without fever.

On the 21st, the hooks, which had become slightly loosened, owing to the continuous pressure exerted on the skin and fleshy parts, were tightened, and on the 29th they were removed. The limb was, however, kept extended. On November 2 a posterior splint was applied and the patient allowed to get up, and on November 24 she was discharged cured, with a firm bony union.

V.—TRANSVERSE FRACTURE OF PATELLA FROM MUSCULAR VIOLENCE; USE OF MALGAIGNE'S HOOKS.

Thomas L., æt. 34, married, a letter-carrier, of Irish birth, was admitted October 14, 1876. He stated that the day before, when stepping from the back of a wagon upon his left foot, he felt the leg suddenly give way and he fell to the pavement. On attempting to rise he found the limb unable to support him. When admitted, a single transverse fracture of the patella was discovered. There was considerable pain and swelling about the knee, subdued as in the former case by anodyne lotions, rest, and the use of the inclined plane. On the 18th the swelling was subsiding, but the separation of the fragments amounted to three-quarters of an inch. On the 21st, Malgaigne's hooks were applied, but it was found impossible to unite the pieces for the whole extent of the fracture. Subsequent efforts, however, and a tendency on the part of the fragments to draw together, remedied this defect. No serious swelling or other complication occurred, and on November 11 the hooks were removed, leaving good osseous union.

VI.—CANCER OF RECTUM; COLOTOMY (OPERATION COMPLICATED BY CYST OF THE KIDNEY); DEATH.

Mary S., æt. 50, married, a housekeeper, born in Ireland, was admitted, October 26, 1876, with constipation, nausea, vomiting, want of appetite, and general prostration. Upon examination, a large cancerous mass was found compressing and apparently entirely surrounding the rectum a few inches above the anus. In the centre was an aperture barely large enough to admit the point of the little finger. She stated that about two years since she was seized with violent pain in the abdomen, followed by severe hemorrhage, and from that time her health failed and she was troubled with constipation. It being evident that any attempts at palliative measures would be useless, and as she was suffering great pain in the abdomen and had not had a passage of any amount for fourteen days, an operation was decided on, and, on November 1, Dr. Morton performed the usual operation for lumbar colotomy. Upon entering the abdominal cavity, a cyst which, from its position, was supposed to be attached to the kidney, was encountered, a string passed through it, and it was pulled partly

out of the wound while its contents, consisting of about ten ounces of a clear fluid without urinous smell, were evacuated. The colon, which had been pushed downward and forward by the cyst, was now reached, opened, and the edges of the wound stitched to the skin by interrupted silver sutures. Almost immediately a small fecal discharge took place. The patient was removed to bed and stimulants and opiates administered. She rested comfortably and seemed much relieved. At the end of forty-eight hours the bowels were fully evacuated, and this occurred once again before death, which happened on the fourth day from simple exhaustion, no signs of peritonitis having showed themselves. A post-mortem examination was refused by her friends.

VIII.—RUPTURE OF QUADRICEPS TENDON FROM MUSCULAR VIOLENCE.

Thomas F., æt. 47, unmarried, a hostler, of Irish blood, presented himself at the hospital in December, 1876. On the 4th of July last, whilst attempting, owing to an alarm of fire, to run quickly downstairs, he tripped, catching his right heel. He went on, but after standing a few minutes at the front door attempted to turn and found himself very lame. The knee immediately began to swell, and he was confined to bed for some days. At this time he was seen by Dr. Morton and myself. The swelling finally yielded to fomentations, etc., but he was left with a permanently weak knee. He was able to extend his leg, but could not stand on it without danger of falling, and at such times had a "dragging pain" above the patella. Soon after, a posterior splint was applied, and by means of this and a cane he was enabled to walk. Afterwards an apparatus, consisting of a leather band above and below the knee with knee-cap and steel side braces, was put on, with the intention of protecting the knee from any extreme flexion. He now walks fairly, though with some limp, and states that there has only been slight, if any, improvement in his condition for the last three months. On examination, a broad depression was found above the upper edge of the patella and extending round to the inner side of the knee, large enough to allow two fingers to be laid in it, and so deep that it was possible to insert the finger-tips under the edge of the bone. On the outside, however, a ridge was left in the line of continuation of the vastus externus. The diagnosis was accordingly confirmed of rupture of the quadriceps extensor except that portion formed by the tendon of the externus, which by its attachment to the patella and thus to its ligament still allowed the power of extension that the patient possessed. I am indebted for many of the particulars in the above cases to Dr. Hopkins, the resident surgeon.

TRANSLATIONS.

ACUTE AMMONIACAL COLLAPSE.—W. Roser (*Centralbl. f. Chirurgie*, 1876, p. 694) read before the Medical Union of Marburg a series of cases of acute ammoniacal collapse, from which he drew the following conclusions: 1. Acute ammoniæmia arising from absorption of decomposing urine excites sudden collapse, with decided lowering of the temperature of the blood. 2. In cystitis and pyelitis this lowering of the temperature may serve as a diagnostic sign of ammoniæmia. 3. If the originating cause of the acute ammoniæmia can be removed without loss of time, for instance, by puncture of the bladder, urethra, or pelvis of the kidney, the collapse is frequently observed to pass off. 4. Ammoniæmia deserves much more attention at the hands of surgeons than it has heretofore received. X.

CASES OF ERYSIPELAS OF THE MUCOUS MEMBRANE.—F. Hesse (*Centralbl. f. Chirurgie*, 1876, p. 694) publishes six cases, observed by himself and others, in which acute febrile angina appeared simultaneously with erysipelas upon the external skin, the former being supposed by H. to be erysipelatous also. As regards the symptoms, Hesse speaks of the initial chill, the high fever, the intense reddening with considerable swelling and diminished secretion of the mucous membrane, together with enlargement of the neighboring lymphatic glands. All the cases observed ended favorably, though in two instances necrosis of the mucous membrane (diphtheria) was observed. Hesse draws the conclusion from these cases that erysipelatous inflammation may occur not only in the external skin, the organ most frequently attacked, but also in certain mucous membranes, particularly those of the

nose, the mouth, and the throat, whether the affection occurs as the direct result of an endemic erysipelas, or whether it is conveyed to these membranes from the neighboring skin. The diphtheria observed in two cases is, according to H., no peculiar diphtheria, but merely a necrosis due to the severity of the inflammation, analogous to erysipelas gangrenosum of the external skin. x.

Poisoning by Chloral.—Dr. August Frank calls attention (*Berliner Klin. Wochens.*, 1876, p. 530) to the great variety of doses recommended as maximal by different writers upon chloral. These range from two grammes (thirty grains) to eight grammes (two drachms). The Prussian Pharmacopœia has adopted one to five grammes as the range. Frank gives also two cases of drunkards coming under his care, in whom 1.25 grm. caused death in one instance, while 2.5 grm. produced a fatal result in the other. The symptoms in the first case were quiet sleep lasting some eight hours, then sudden collapse, brief convulsion, and death. Moderate congestion of the brain, slight intestinal catarrh, and emphysema of the lung were the only post-mortem appearances. In the second case the patient, after taking the medicine in two doses immediately following each other, fell into quiet sleep. Six or eight hours later he began to breathe irregularly, and before a physician could be summoned was dead. Excepting unusual fluidity of the blood, no abnormal post-mortem appearances were observed. The chloral was of good quality, and had been used successfully in other cases. Frank regards 2.0 to 2.5 grm. (30 to 40 grs.) as the proper maximum dose of chloral. x.

Pathology of "Taking Cold."—Dr. Aphonassieff, of St. Petersburg (*Rudnew's Journal*), undertook a series of experiments upon animals with a view of ascertaining what effect would be produced upon the parenchyma of the various internal organs by cooling the blood circulating near the surface. Microscopic examination of the organs of animals killed by the reduction of their temperature showed certain changes in the structures of the liver, the heart, and the kidneys, which pointed to inflammation of these organs. The muscular fibres of the heart were swollen, and their striations for the most part had disappeared. Some fibres showed waxy degeneration, but most were opaque and granular; the nuclei were not visible. Fine granular cells containing a double nucleus were also met with. Somewhat similar appearances were observed in the kidneys and liver. Dr. A. believes the inflammatory process to have been set up by the afflux of cooled blood from the periphery to the centre acting as an irritant upon the internal organs. He believes his experiments to have a bearing upon the common affections grouped under the title of "a cold," which he considers due to the cause just mentioned. x.

Symptomatic Glycosuria.—H. Quinke (*Berliner Klin. Wochens.*, Nos. 37 and 38, 1876) gives notes of a case of cirrhosis of the liver in which the appearance of sugar in the urine and other fluids of the body was a prominent symptom, and in connection with the case alludes to other instances in which similar observations have been made. Claude Bernard observed glycosuria in dogs in whom the portal vein had been gradually closed, the sugar appearing whenever the animal was fed with starch. Couturier found, in the case of cirrhotic patients, that the urine passed after eating starch contained sugar, while that passed during fasting did not contain any. The glycosuria in these cases was transitory. In the same paper, Quinke calls attention to the fact that in opium-poisoning glycosuria is a symptom, and may possibly be an aid to the detection of the poison when other signs fail. x.

Preventive Trepannation in Fractures with Displacement of the Fragments of the Internal or Vitreous Layer of the Cranium.—M. C. Sédillot (*Centralbl. f. Chirurgie*, 1876, No. 48) warmly recommends prophylactic trepannation in injuries of the skull with splintering of the vitreous table, in order to avoid inevitable and almost always fatal complications. Sédillot has collected 106 cases of the kind, in which 77 were trepanned; 9 by way of prophylaxis. In 68 of these, seven complications, paralysis, loss of consciousness, etc., were observed. Among the latter 21 were trepanned before the fifth day, 47 after the fifth day following the injury. In 21 cases the outer table was not fractured. Of the 29 not trepanned, 28 died, 1 was cured. Of the 77 trepanned, 29 were cured, 48 died. Prophylactic trepannation gave 6 cured, 3 fatal cases. Of 68 trepanned upon the appearance of brain-symptoms, 23 were cured, 45 died. Sédillot

speaks of the difficulty of diagnosis when the outer table is not fractured. In these cases he prefers to wait for brain-symptoms. x.

LACTIC ACID AS A HYPNOTIC (*Centralbl. f. Chirurg.*, 1876, No. 41; from *Deutsche Med. Wochens.*).—Mendel alludes to the fact that W. Preyer first recommended lactic acid as a hypnotic in 1875. He deduced this from the circumstance that in extreme muscular and nervous exertion followed by sleep, certain matters, particularly lactic acid, are formed, which, passing into the blood, cause weariness, drowsiness, and finally sleep. Preyer recommended this substance as an antifebrile and sedative in mania and certain forms of spasm. L. Meyer employed the lactate of sodium in cases where morphia was used habitually, and came to the conclusion that the former medicine could only in exceptional cases supplant morphia. Meyer obtained also similar results with the pure lactic acid. Mendel himself has employed the latter extensively of late, and is of the opinion that in all cases where pain is the cause or accompaniment of sleeplessness lactic acid fails to act. On the other hand, Mendel recommends this medicine in—1, vigilance occurring during exhausting disease or convalescence; 2, for quieting insane patients, particularly during violent mania; 3, in certain obscure psychical disturbances. As for the method of employing this medicine, it may be given as a lemonade, with water and sugar, the dose varying from 5 to 10 grammes—80 to 160 grains.

Subcutaneous injections of lactic acid cause painful boils, abscesses, etc. The best method of administration is by enema. The dose thus given varies from five to twenty grammes, which is mixed with about the same amount of soda, and only a sufficient quantity of water added to fill a child's enema-syringe. Given in this way daily for weeks, no untoward results have followed the use of the remedy in Mendel's hands. x.

LOCALIZED TUBERCULOSIS OF THE LIVER (J. Orth: *Virch. Arch.*, Bd. lxvi. p. 1).—Orth has twice observed that very rare pathological condition, large localized deposits of tuberculous masses in the liver. In the first case there was a cheesy mass of the size of a walnut, surrounded by numerous smaller deposits in the right lobe, accompanied by universal miliary tuberculosis and some disseminated tubercle of the liver.

In the second case there was tuberculous peritonitis, and but little change of other organs. There was extensive cheesy degeneration of the portal and retro-peritoneal lymphatic glands, and, with a small amount of disseminated tubercle of the liver, a tuberculous tumor as large as a man's fist, and lobulated. These tumors had been felt through the abdominal parietes during life, and a diagnosis of cancer of the liver given. Orth is inclined, on account of the size of the tumor and the similarity which he noticed under the microscope between it and the so-called solitary tubercle of the brain, to regard the affection of the liver as primary, and to refer the infection of the lymphatic glands to it.

W. A.

TREATMENT OF BOILS.—Dr. Ory (*La France Méd.*, 1876, p. 807) gives a summary of the various forms of treatment recommended by different authorities for furuncles. M. Savignac, besides mild purgatives, orders the following:

℞ Sodii arseniat., 10 cent. (grs. 1.6);
Aquæ dest., 200 grms. (f℥vj, f℥iij). M.

Of this one dessertspoonful is to be taken before breakfast and tea, in a little water.

Furuncles are frequently observed in dyspeptics. In these cases alkalies are to be recommended: the waters of Vichy, Vals, etc., the bitters calumba and quinine, nux vomica, and the like, are also of use, and plenty of out-door exercise is advisable. Dr. Hardy has great faith in the prolonged use of tar-water ("goudron de Guyot") in the dose of a dessertspoonful in a glass of water. Dr. Bulkley, of New York, has proposed the following as a prophylactic: hyposulphite of sodium grs. 25, three times a day in plenty of water. To be taken at meal-time. Dr. B. also recommends large doses of sulphate of quinine. Dr. Hall, of Cincinnati, suggests—

℞ Tinct. arnicæ flores, 2 pts.;
Acid. tannic., 1 pt.;
Pulv. acaciæ, 1 pt.

A fragment of lint wet with this mixture to be placed upon the boil and changed every fifteen minutes until a coating is formed. This causes the throbbing pain to disappear, diminishes the tension of the integuments, causes the abortion of the boil, or, if too late for that, hastens the separation of the core. x.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JANUARY 20, 1877.

EDITORIAL.

MEDICAL AND PHARMACEUTICAL LEGISLATION.

ON the last day of December, 1876, the California State Medical Law went into operation. Under its provisions there are three Boards of Examiners, who have the power of granting licenses. If our information concerning this bill be correct, it requires the practitioner to have a diploma from some chartered medical college; but in order to make room for the number engaged in practice in California without such diploma, it allowed up to January 1, 1877, the passing of examination before one of the boards to take the place of the diploma. Hereafter the door is closed to all non-graduates. This law is apparently based upon the deadly fallacy that an American medical diploma is a guarantee of a sufficient knowledge of medicine. It may do some good in California, but would work harm here, except in doing away with the prejudice against law which is a nightmare with many of the profession, and especially violent with those whose interests are best served by maintaining the present *status quo.*

Various attempts have been made in California to originate new licensing boards, but these have all failed; so that there are in the State only the three legitimate boards, which, with the licenses already granted by them, are as follows:

Medical Society of the State of California	700
Eclectic Society	40
Homœopathic Society	50

Hereafter the would-be practitioner of medicine in California must show his diploma to one of these boards and receive a license.

There is one advantage in this regulation: every one has to stand somewhere; and, the lists being public, no opportunity will be offered for the smooth rascals who practise anything. Such will be reduced to some such shift as that said to be practised in the upper part of this city by a man and his wife. This worthy couple, united in the same buggy at the patient's door, before getting out in one of its members, inquires which is wanted, regular or homœopathic. If the latter, the harmless daughter of Eve emerges; if the former, the brother if not the direct descendant of the bloody Cain.

In 1872 the Pennsylvania Legislature passed an act which provided a State examining board that should grant the right to practise pharmacy. Unfortunately, the gentlemen who prepared and insured the passage of this law inserted a section which limited the action of the bill to those persons who are not graduates of some incorporated college of pharmacy. At first everything worked smoothly. The diploma of the Philadelphia College of Pharmacy differs from that of the medical colleges in that it is an honest document, which really guarantees that the possessor of it is also the possessor of a fair amount of pharmaceutical knowledge: so that the fault in the bill did not work injury. It is very possible, indeed, that it was expected that the passage of the bill should work good to the classes of the College of Pharmacy. If so, or if not so, still a fatal mistake was made, and the seed sown is now bearing fruit. In 1871 the General Assembly granted a charter to the Pennsylvania College of Pharmacy, and last October this new college commenced its operations. The announcement lies on the table before us, and is sufficient to carry conviction to every mind as to the character of the enterprise. The only name which appears upon it is that of a Dr. Martin Roche, who may possess all the

virtues as he has hitherto certainly shared the obscurity of him whose praises the great elegiast sang,—

> "Here rests his head upon the lap of earth
> A youth to fortune and to fame unknown,"—

but who we fear is destined to share in the reputation of Drs. Paine, Buchanan, *et alia*. This dread is upon us because we read in the circular that the institution "is especially authorized by its charter to confer degrees *whenever merited*" (italics as in the original); also that persons are invited "to come forward" without attending lectures; also that pharmaceutical and medical students "can matriculate at this college with the encouraging prospect of graduating *one year sooner* than by attending two courses in any one institution."

Before leaving this subject, we cannot refrain from reiterating that no valid objection exists to a State examining board; that the only real obstacle in the way to a reform in pharmaceutical as well as in medical education lies in the indifference of the laity and of the general profession, and in the active opposition of those of the profession whose interests are served by maintaining the present *status quo*. The objection that the boards would become mere political hacks has become "stale, flat, and unprofitable." In California the medical societies appoint the licensing boards; in this city the pharmaceutical board, appointed by the mayor, was composed entirely of men fit for the position, and a fair proportion of them men of marked eminence in their profession. If the pharmaceutical societies were to ask it, the examining board could be appointed by the courts, or even by the College of Pharmacy itself. If the medical profession were to demand it, a law could be obtained under which the examining boards would be appointed by the courts or by the three legal State medical societies,—regular, homœopathic, and eclectic,—as in California.

RECENTLY the New York County Medical Society adopted a resolution advising the use by their members of the French or metric system in prescribing medicines. There can be no doubt of the superiority of this system of weights and measures over any other before the modern world. This would seem to be evident in itself, but is certainly shown by the steady advance of the system in popular favor, and by its almost exclusive adoption by scientists throughout the world. How far the practitioners and especially the druggists of New York are prepared for the change we do not know. The *Medical Record* appears to believe the times are ripe. In this city, however, and much more throughout the rural districts and smaller cities of the United States, neither the prescribers nor the compounders of medicines will, according to our thinking, pay any attention to the matter at all. It is probable that in the course of years the metric system will replace our weights and measures; but the Anglo-Saxon race seems especially obstinate in delaying to adopt such changes. So long as none of the practical business of the country is carried on by means of these decimal weights and measures,—so long as professors do not teach and English pharmaceutical and medical authors do not write upon such basis,—so long is it unwise to judge the change nigh at hand. We are glad of the action of the New York Society,—we are glad of all agitation about the matter,—because it hastens the inevitable but long-distant day. Nevertheless, we believe that those of our readers who dread new modes of thinking need not be disturbed, and that they will long be able to possess their souls in patience,—probably until their generation has passed away.

THE English parliamentary annual grant of two thousand pounds for scientific investigations into the causes and processes of disease is in future to be placed at the disposal of the Royal Society.

LEADING ARTICLES.

RECENT PROGRESS IN THE TREATMENT OF VENEREAL DISEASES.*

I.—NON-SYPHILITIC.

A LITTLE book recently published in Paris under the joint authorship of two well-known specialists, MM. Diday and Doyon,† contains a very fair résumé of the present state of our knowledge upon the subjects of which it treats. M. Diday's portion of the book treats of the therapeutics of venereal disease. While containing nothing very new, it is written in so agreeable a style as to be very interesting reading. M. Diday sums up the experience of thirty years in the treatment of gonorrhœa somewhat as follows:

The ordinary course of gonorrhœa may be divided into four stages, comprising a first stage of very short duration, during which the disease may, in certain cases, be made to abort; a second irrepressible stage, which commences about the third day, and lasts from four to six weeks or longer; a third stage, called "repressible," which is marked by symptoms announcing the "maturation" of the discharge; and a fourth, "chronic" stage, in which the disease becomes stationary.

The first stage is characterized by a feeling of warmth during micturition, perceived about two and a half days after exposure, and by the appearance of a drop of semi-transparent discharge at the meatus. The "abortive" treatment may be practised at this period with success, or, in any event, without injury. A solution of nitrate of silver, one part in ninety,‡ may be injected to the amount of a drachm by the surgeon, contact being limited to the first two inches of the canal and maintained during five minutes. Artificial urethritis sets in within an hour or two and lasts one or two days, and in successful cases the trouble is then cured. A second attempt, should the first fail, is rarely successful.

In the second stage, when the discharge is over three days old, when it amounts to an hourly drop, when pain attends micturition or erection, when the lips of the meatus are red and shiny, repressive treatment is useless or harmful. "The secret of success," says Diday, "lies in patient expectation throughout this second stage," such expectation being disguised by various *placebos* (demulcent drinks, warm baths, etc.), and supplemented by various hygienic precautions (abstinence from spirituous and malt liquors and the like, avoidance of conjunctival inoculation, and the use of a suspensory bandage).

The "repressible" stage is attained gradually, after a mean duration of five or six weeks, sometimes less, very often longer. Not unfrequently two and a half to three months elapse before it is reached. Its signs are almost entire absence of pain during micturition and erection, disappearance of the red and swollen condition of the meatus, and a considerable diminution of the discharge, which is no longer yellow or green, but whitish and viscid. This condition being attained, a suppressive medication may be instituted with good prospects of success. Diday's favorite remedy is the *opiat* of copaiba and cubebs. Properly administered, in suitable doses, this drug should, in the course of less than a week, cause the discharge to cease. The administration should be continued during a second week, to prevent recurrence. Should the discharge continue after the sixth day without showing signs of amendment, the use of this drug should be suspended. If, however, the symptoms have begun to ameliorate, the drug should be pushed.

As regards the stationary stage, the last and chronic result of untreated or maltreated gonorrhœa, there is little or no pain; the discharge is of small amount; the disease has become refractory to the use of copaiba and cubebs; and it readily becomes subacute under the influence of irritating agencies. In such cases the main reliance lies in the use of injections; that of Ricord, prescribed as follows, being preferred by Diday:

℞ Zinci sulphatis, gr. viij;
Plumbi acetatis, gr. xvi;
Tinct. opii,
Tinct. catechu, āā ℥ss;
Aquæ destillat., ℥iv.—M.

Sig.—Three injections daily.

Copaiba is no longer useful unless the disease is still somewhat acute, and then

* Most of the facts contained in the first part of this article are derived from the admirable digests of Drs. T. B. Curtis (Boston Med. and Surg. Jour.) and Drs. R. W. Taylor and R. F. Weir (Archives of Dermatology), which are frequently quoted nearly verbatim.

† Thérapeutique des Maladies Vénériennes et des Maladies Cutanées. P. Diday et A. Doyon. Paris, 1876.

‡ This is much stronger than is advised nowadays by some of the best authorities. Van Buren and Keyes say, "The only allowable abortive treatment, so far as nitrate of silver is concerned, is its use at the strength of gr. ss to ℥i."

only after abstinence from the use of the drug during at least six weeks.

Gleets are ascribed by Berkeley Hill in a recent paper*—1st. To inflamed patches in the urethra, which can readily be detected by the endoscope, and by the "*bougie à boule*" (olivary, acorn, or bulbous bougie), and are best treated by injections by the attending surgeon of a solution of nitrate of silver, 10 to 20 grs. ad ℥i, to be repeated every three or four days. This treatment can be alternated with the use of soluble bougies (porte-remède Reynal). When these inflammatory patches degenerate into slight strictures, he divides with a modification of Otis's dilating urethrotome.

2d. To granulations, for which he uses a bougie previously dipped in melted wax, in which various medicaments have been suspended, *e.g.*, 5 to 10 grs. of the peroxide of mercury, or 5 grs. of the nitrate of silver to the ounce of wax. This failing, he employs a stronger injection of 30 to 40 grs. of nitrate of silver.

3d. To inflammation of the glands and follicles of the urethra.

4th. To prostatic complications, as from the extension of a gonorrhœal inflammation.

Improved methods for the treatment of stricture continue to excite much attention, the discussions taking place from time to time in the various societies and in journals showing much difference of opinion among those who have given most attention to the subject. According to Mr. Teevan,† the methods of treating strictures now in vogue are: (1) The expectant plan, *i.e.*, rest, warmth, and purging, only reserved at the present time as an aid in overcoming difficult strictures. (2) Continuous dilatation. (3) Gradual dilatation, in favor with most surgeons, and failures rare when soft French instruments are used. (4) Caustics, of service in "impassable" stricture, in order to open the way for the introduction of an instrument. (5) Electrolysis, still *sub judice*. (6) By sliding one instrument over another (Wakley), useful where false passages exist, or where the stricture is very tortuous. (7) Forcible dilatation (divulsion), a treatment rapidly falling into disuse. (8) Urethrotomy. The internal section he states is rapidly gaining in use in all parts of the world, though he believes subcutaneous urethrotomy to be the operation of the future. External urethrotomy he reserves for horny or resilient strictures complicated with perineal abscess or fistula.

Dr. F. N. Otis has shown that the normal urethra is wider than had been generally admitted before the results of his investigations were made known. According to him, a constant relation exists between the urethral calibre and the size of the penis. The proportion runs as follows: when the flaccid penis measures three inches in circumference, the size of the urethra will be thirty millimetres in circumference (that is, will just admit a sound No. 30, French scale) or more; when it is 3¼ inches it will be 32 or more; 3½ inches, 34; 3¾ inches, 36; 4 inches, 38; 4¼ to 4½ inches, 40 or more millimetres.

With these views of the normal size of the urethra, Dr. Otis maintains that any diminution in calibre, however slight, constitutes a stricture. Special instruments have been devised by Dr. Otis for measuring and exploring (the urethrameter), and for incising (the dilating urethrotome) the urethra, when it is judged necessary. In accordance with his views of calibre and of stricture, Dr. Otis found and incised in one case as many as fourteen strictures.

The views of Dr. Otis are not shared by all of his colleagues who have made the subject a special study, and they have repeatedly been criticised, as recently at a meeting of the Medical Society of the County of New York.

Among other points stated by Dr. Otis was the superiority of the "*bougie à boule.*" In one of his cases a No. 17 bulbous sound was distinctly arrested at the points of stricture, while a No. 25 steel sound could be easily and freely passed into the bladder. This circumstance, which Dr. Otis interprets as an instance in favor of the bulbous sound as a stricture-finder, is believed by other authorities to indicate the "*bougie à boule*" as a deceptive urethral explorer, the use of which may lead to the supposition of the presence of a stricture when none exists.

On the same occasion, Dr. Bumstead, speaking first with reference to gleet and organic stricture, expressed a doubt whether the former invariably depended upon the latter. He advocated urethrotomy as being

* A Clinical Lecture on Gleets, Lancet, Feb. 13, 1875.
† Modern Methods of treating Stricture, Lancet, Jan. 9, 1875.

the best means of treatment for the cure of stricture, having discarded Holt's operation in its favor. He believed in cutting, up to 35 and 40 F. With respect to slitting up the meatus, he was of the belief that it was done altogether too much. He had, however, seen no evil results from the operation, and did not hesitate to resort to it if necessary to effect the passage of an instrument.

In the *Boston Medical and Surgical Journal*, November 30, 1876, Dr. Ed. T. Caswell gives notes of fifteen cases of stricture, of which twelve were gonorrhœal in origin. These were for the most part ruptured with Holt's dilator. In five cases perineal section was performed. Two deaths occurred, one of which was after the operation of rupture. In only six cases was the operation followed by a chill, and in three of the six there were no further indications of urethral fever. Dr. Caswell attributes this exemption to the almost uniform practice of administering a large dose of quinine and morphia as soon as the patient comes out of the ether, and to putting him to bed in blankets. As regards the different instruments, Dr. C. prefers Thomson's divulsor, and he sees no reason for preferring the slow and tedious process of gradual dilatation to the more rapid measures; and in all cases of traumatic stricture, or of stricture complicated with fistula, he believes the perineal section affords the most satisfactory results.

In the same number of the *Journal*, Dr. J. Foster Bush gives two cases of stricture, and remarks that these and many similar cases from hospital records show a point upon which he thinks sufficient stress is not laid, namely, that the operation for stricture does no good unless the after-treatment, the continual passage of a sound or bougie, is faithfully carried out; and that if we are not watchful in so doing the inflammatory action will again get the upper hand and will make the case as bad as before, if not worse. Dr. Otis does not partake of this view, we believe.

Mr. Annandale speaks favorably of the operation in stricture with multiple fistulæ, recommended by Mastin, of Mobile, of opening the urethra just anterior to the stricture by an external incision, and then introducing through this aperture a Maisonneuve's urethrotome to divide the stricture. Coleman, after passing a fine whalebone bougie through a tight stricture, inserts successively others alongside of the first on the "multiple wedge" principle, as he terms it. The method is an old one.

Finally, we may quote the remarks of Mr. Teevan in considering the question, "Is stricture of the urethra curable?" He says, "So far as I know, no surgeon has ever been able to place before the profession a dozen cases of stricture which he has cured by operation and which have been submitted to a crucial time test. The matter stands thus: whatever operation we may select for the relief of a stricture, we shall fail to cure the patient. Pathologically speaking, no stricture is curable, but practically nearly all strictures are remediable. Of all cases of operation for stricture which have come under my care, in which the operation was performed by myself or others, I have never yet met one in which, on examination with the *bougie à boule*, I did not detect some remains of the stricture, though years may have passed away after the operation." This was also, he says, the judgment of Delpech, and it has not yet been reversed.

Regarding the treatment of *chancroid*, very little has appeared recently. The use of iodoform, which for a while became quite prevalent, does not now seem to meet with the same favor as formerly, and, in general, it may be said that the most simple applications are usually employed. Simmons* has lately obtained excellent results in the treatment of phagedenic and gangrenous soft sores by continuous immersions of the affected parts in hot water. He cites the case of a woman with very extensively destructive and persistent chancroidal ulceration of the genitals as being cured by this means, after the usual routine measures had failed completely. He used an ordinary sitz-bath, with a large sponge for the woman to sit upon. The destructive processes were arrested, a healthy action established, and a cure resulted in two weeks. At first patients should be kept in the bath continuously, but in accordance with the improvement of the case immersion for every alternate hour only is necessary. Simmons thinks that the beneficial result is simply due to the removal and dilution of the discharge. Dr. R. W. Taylor has used this well-known means of treatment extensively with signal success in the bad class of cases met with in dis-

* On the treatment of phagedenic gangrenous venereal sores, Medical Record, September 11, 1875.

pensary practice, and he fully endorses Dr. Simmons's conclusions. He thinks, however, that Simmons's explanation is not entirely sufficient to account for the good effects of the procedure, which Dr. Taylor attributes not only to the removal and dilution of the secretion, but also to the decidedly stimulant effect of the heat and moisture by which the capillaries and larger vessels are noticeably contracted, or rather constringed. A. V. H.

CORRESPONDENCE.

LONDON LETTER.

THE man who told a cynical philosopher that "he must live," as some palliation for his conduct, was answered "that he did not see it." This answer might be regarded rather as practical than as indicative of sympathy, and probably the unfortunate individual thought himself hardly used. The *Medical Press and Circular* has recently been enacting the part of the cynical philosopher, and found itself in a court of law for an action for libel in consequence, and got the worst of it. However, the sum will neither tax the resources of the publisher nor add much to the yearly takings of the injured and now compensated practitioner. The matter possesses its chief interest from the fact that it has been the means of calling out an expression of professional opinion as to the original subject-matter of the action. Amidst the difficulties experienced in this world is the one of getting a start in life, a matter of much greater difficulty here than with you. In your big country a man who is good for anything and willing to work will not be long in finding a hole for which he is not altogether an unsuitable peg; but here the hole is much harder to find. This difficulty is felt very markedly by many young members of our profession, and many and numerous are the shifts they have had to resort to. The different ways of adding to the professional income adopted by the more highly educated aspirants to practice are well known; but for those who have entered upon their professional life with a limited amount of intellectual capital, these ways will not work. Consequently, they have recently adopted a plan which apparently is profitable and lucrative and yet has a *soupçon* of benevolence about it. Provident Dispensaries has been the favorite game of a large number of men.. In reality these are often but private places of business, where the proprietor sits at certain hours and gives medical advice and medicine for a fixed sum. Usually the sum has been fixed at one shilling. A large number of these so-called Provident Dispensaries have been established, especially in poor neighborhoods, and have been well patronized by the poor. It so happens that the writer knows something of the working of these institutions. Meeting one day casually an old college acquaintance who had not been seen for many years, mutual inquiries were made as to what each was doing. Knowing that my old acquaintance was a man who studied the world and its ways, and yet had certain ways of his own which militated against his going in for high-class family practice, my curiosity was excited as to what scheme he had evolved. He had started a Provident Dispensary, and sat two hours every morning and an equal time every evening, and saw patients for a shilling each, to include advice and medicine. He described it as a paying kind of business, the shillings thus received forming the bulk of his income. He is a shrewd man, of great parts in his way, and assured me that too careful and too prolonged examination of a patient was regarded by his clients as indicating a want of capacity and consequently was injurious. They preferred a quick and prompt decision. The advantages of such prejudices to a man who is shrewd are obvious; and in this perhaps more than in any other department of the profession is required a competent knowledge of the world rather than extensive professional knowledge; though the first is essential to great success in every branch of it. Of course the connection so formed led to further practice, such as visits at home and midwifery. One or two accidental rencontres followed at intervals, and each time my quondam acquaintance looked sleeker and more prosperous. He informed me that he had opened a branch practice and kept three assistants, so that he did little work himself; and the last time I saw him he was driving a well-appointed phaeton, with a high-stepping horse in the shafts, and a man in livery behind him.

Of course this arrangement, by which patients get advice and medicine for the modest sum of one shilling, has increased greatly of late, since it has been found lucrative and easy in its working. So profitable, indeed, has this line of practice become, that a less sum than a shilling seemed feasible, and at least one qualified man has publicly announced by circular that at his dispensary advice and medicine may be procured for fourpence in the morning and sixpence in the evening, his tariff for home visits being arranged on a similar scale, so as to be within the reach of all but the absolutely destitute. This seemed to the editor of the *Press and Circular* to be carrying the thing a little too far, and consequently he gibbeted this enterprising gentleman in its columns, giving a fac-simile of his advertising sheet, and commenting thereupon. The editor gave it as his opinion that the advice would not be of a very high order nor the medicines very expensive which were furnished for fourpence, and indulged in

some reflections which so galled this follower of Æsculapius that he went to law and laid his damages at one thousand pounds. However, the damages were assessed at a sum nearer his own charges, and his feelings are, no doubt, soothed at the notion of having had his revenge on his critic. A good many of the profession have thought, however, that the *Press and Circular* has been discharging its duty to the profession by its conduct, and so an influential meeting has been held in London to express their sympathy and approval. The chair was taken by Dr. Quain, who commenced by pointing out the difference betwixt the proprietary dispensary, in which the owner tried to make as large a profit as possible out of his patients, and the provident dispensaries, which are under the direction of governors, and which are truly charitable institutions. The first resolution was as follows: "The principle of establishing proprietary dispensaries, under the guise of provident institutions, is in the highest degree objectionable, and ought to be discouraged, as fraught with danger to the public, and as tending to degrade the status of the profession." The second runs thus: "This meeting desires to express its approval of the policy of the conductors of the *Medical Press and Circular* in bringing the influence of their journal to bear against such institutions. It also considers it a matter for regret that a verdict should have been obtained against them in a court of law for a conscientious expression of opinion, and it desires to offer them its entire sympathy and support." The first resolution was proposed by Mr. W. Adams, and the second by Dr. Barnes; both were carried unanimously. A similar meeting has been held in Dublin, with like results. It has also been determined at both places to get up subscriptions to aid in defraying the expenses of the journal. I have not come across the gentleman with the phaeton and high-stepping horse since this meeting, and, not being acquainted with any one else in that line, I do not know what the owners of these provident dispensaries say; but the voice of the rest of the profession has been distinct enough on this subject. As to the profits actually made, my informant told me that he got his shilling "clear,"—all profit. This seemed absolutely incredible, as even the cheapest medicines cost something; but he demonstrated how it was done. A considerable number of his patients neglect to provide themselves with a bottle, and provision is made for these thoughtless individuals, who can procure from the dispenser a bottle for a penny. These pennies purchased the bottles and all the medicine prescribed. The arrangements for getting the maximum of medicine for the minimum of money showed considerable shrewdness; and sulphate of magnesia, sulphate of iron, and quassia form a compound of some potency, of which a great deal may be made by a very moderate outlay. Taking these facts into consideration, it becomes possible to see how even fourpences, if there are a sufficient number of them, may leave a margin on which an enterprising individual may contrive to do something more than subsist.

Of the graver operations which may any day and without previous warning present themselves before the general practitioner is that of *Cæsarean section*. A case has recently occurred in which mother and child were both saved; and as an equally successful case had some sixteen years ago fallen into the same hands, the details may be instructive as well as interesting to many of your readers, as Dr. Edmunds seems to have anticipated every difficulty and met successfully every complication. The patient was a lively, bright Alsatian, who had come to England to be confined, so that her child, if a boy, could never be compelled to fight against the French in any future Franco-Teutonic struggle. She had always had excellent health, except a little catamenial derangement. She had married, and she and her husband had experienced some obstruction in coitus, but not sufficient to cause them to consult a medical man. She had been in labor three days when Dr. Edmunds was called in, and had borne the ordeal famously. It was found that the pelvis was occupied by a large rounded tumor which sprang from the right ischium as its base. It had grown upwards and inwards, so as to displace the vagina. A chink less than an inch in width was all that was left betwixt the tumor and the left edge of the pelvic brim. The tissues of the pelvic organs were healthy and in no way involved in the tumor. All hope of effecting delivery by the natural passages had to be abandoned, and Cæsarean section was decided upon. It being Sunday evening, and other arrangements being impracticable, the patient was put into a cab and driven to the Temperance Hospital, to which institution Dr. Edmunds is senior physician. Being aided by several friends, the operator proceeded as follows: 1st. A terebinthinate enema was administered, to clear out the bowels and with the hope that the turpentine would act as a hæmostatic. 2d. Carbolic acid spray was projected into the atmosphere of the operating-room until the chamber smelt distinctly of it, while the temperature was raised to 80° Fahr. 3d. The most scrupulous care was taken to have no septic matter on the instruments, the whole of the attendants and the operating body were carefully disinfected, the hands scrupulously cleaned, and lastly washed in iodine water. 4th. The patient was seated nearly upright upon the edge of the operating-table, in order that the blood might flow out over the pubes instead of sinking down into the interstices of the intestines. Nurses held each lower limb steady, and a Windsor chair

was placed behind the patient's back, so that she was firmly secured. Chloroform was then administered. The bladder was emptied by means of a long male catheter. The incision was commenced at the umbilicus and continued downwards in the median line to within three inches and a half from the top of the symphysis pubis. It was then carried cautiously downwards for an inch or more, as the bladder was found to extend some four inches above the pelvic brim, and, filling with urine, prolapsed through the wound during the operation. It got so much in the way that a catheter was passed and kept in situ. In consequence of the position of the bladder the incision was carried upwards beyond the umbilicus. The whole incision was six inches in length.

The uterus was seen lying diagonally across the abdomen, its fibres distinct through the peritoneum, and its walls tensely stretched upon its contents, the waters having escaped at an early period. The fibres retracted forcibly on being severed by the knife. The shoulder of the infant appeared in the cut, and the rest of the incision was completed on a director. The fœtus was seized by the head and withdrawn, the uterus closing upon itself very promptly. The child being in a state of suspended animation, the placenta was extracted and laid beside it, while Dr. Routh proceeded to restore it. After the withdrawal of the placenta the uterus contracted and expelled a few ounces of blood, which flowed safely over the pubis. The fingers of the right hand were inserted to extract some fibrinous clot, after which the uterus was gently kneaded to induce it to contract firmly. Rounded fragments of ice were dropped into the uterus from time to time, and brought in contact with the whole surface. The uterus contracted perfectly, each contraction squeezing out a little fluid, which at first was pure blood, and afterwards only red serum. The wall of the contracted uterus was about three-eighths of an inch in thickness. Its internal surface became coated with felted fibrin, and the red serum which followed at each contraction left plugs of fibrin in the uterine sinuses. After three-quarters of an hour, it was thought safe to proceed to sew up the incision. Two silver-wire sutures were passed through the abdominal walls, closing the lower portion of the incision, after which the upper portion was closed by four similar sutures. These sutures were carried through the whole thickness of the abdominal wall. They included two-thirds of an inch of skin and one-third of an inch of peritoneum. Just before closing the abdomen an œsophageal tube was passed into the uterus and out through the vulva to make sure of a passage for the lochia.

Having tightened and fastened the sutures, the surface of the abdomen was sponged, and then tapes of adhesive plaster were fixed betwixt the sutures, and the edges of the wound brought into exact apposition. A thick sheet of carbolized wool was laid over the abdomen, and finally a five-inch flannel bandage was rolled around the body so as to take off any tension upon the tapes and sutures, and the operation was complete. In its contractions the uterus seemed as if about to turn itself inside out. The loss of blood was about ten ounces. Very little chloroform was used, and, after the removal of the child, the mother sank into a natural sleep, like Damiens in the intervals of the rack. In addition to the turpentine enema, the patient had internally one hundred drops of secale cornutum in divided doses, and sixty of oil of turpentine, shaken up in milk, in two doses. When the operators left, the patient was sleeping calmly, the pulse and respiration being almost normal. The patient was fed on milk and water and oatmeal gruel sweetened, and had neither physic nor alcohol prescribed; indeed, both were forbidden. A hyoscyamus draught was given on the third day for some flatulent pain, and a dose of castor oil on the fifteenth day to open the bowels. The after-history of the case is entirely negative, the patient recovering without one single evil symptom, and the baby being equally fortunate. Mother and child were both shown to the medical society before the paper was read.

A long and adjourned discussion followed, in which the subject of suturing the uterus was thoroughly discussed. In both of his cases Dr. Edmunds left the uterus unsutured. The case is one of great interest, and exhibited in a high degree the good results of combined skill with an excellent patient. Dr. Edmunds was highly and deservedly complimented on his successful results. The case, of course, is a very fortunate one for the Temperance Hospital, and a great feather in its cap. But, after all, most of the merit lies in the fine physique and high courage of the patient, who slept through the greater portion of the operation without chloroform, and never needed a stimulant.

An equally successful case of Cæsarean section has occurred in the hands of Dr. Llewelyn Thomas, also of London; but the details of this case have not yet been published.

Dr. Barnes recently delivered an able address before the Midland Medical Society at Birmingham, on pregnancy regarded as an experiment illustrating general pathology. In contrasting the uræmia with convulsions of pregnancy with the condition of chronic Bright's disease he said, "In both, there is highly increased vascular tension; but in gestation this is rapidly induced. In gestation, the mobility—if we may use the metaphor—of the sympathetic, cerebral, and spinal systems is enormously exalted. The sympathetic nerves presiding over the dilatation and contraction of the blood-vessels generally seem also to be the agents which determine those sudden fluxes of blood to particular regions or struc-

tures, of which we see so many striking examples in the female economy. For example, we have the familiar rush to the capillaries of the face and neck under the emotion which causes blushing, the sudden rush to the breasts and rapid secretion of milk under the emotion of maternal feeling, the sudden rush of blood to the uterus often revealed in flooding under various emotions of joy or fear." He also held that the diarrhœa, the vomiting, and the profuse salivation often found during gestation were at times not deleterious, but really useful in lowering and relieving the high vascular tension. He further pointed out the circumstances under which abortion might occur as a beneficial action,—that it might be salutary in design and not seldom in effect. It terminates an experiment which is found to be dangerous to the economy. Further, "it may be affirmed that whereas abortion is the natural mode of relief when the resisting and accommodating forces are overpowered, these nervous explosions in vomitings, sneezings, twitchings, are in the majority of cases means of discharge of excessive nervous energy, by which abortion is averted." As an illustration of the effects produced by pregnancy upon the nervous system, he quoted the case of a lady—the wife of a medical friend, curious to say—who had been insane before marriage. "The mental disorder was suspended during two pregnancies, and recurred afterwards. May we explain this by supposing that the function of pregnancy, demanding special nerve-force, diverted to this physiological channel that which would otherwise have found a pathological expression?" he inquires. Finally, he regards pregnancy as a great test of bodily soundness, and "a more cruciferous experiment than was ever devised in the laboratory."

Mr. James Lane is delivering the Harveian lectures this year, the subject being syphilis. Mr. Lane is thoroughly conversant with his subject, and his first lecture was listened to with great attention, while his second lecture promises to be more interesting still. In reviewing the circumstances under which John Hunter inoculated himself with syphilis while using gonorrhœal virus,—an unfortunate accident which originated a wrong hypothesis as to the unity of gonorrhœal and syphilitic poisons,—Mr. Lane gave it as his opinion that the infection was not due to a urethral chancre, but that the patient was a syphilitic individual. Mr. Hutchinson recently pointed out how a discharge from a syphilitic individual might contain the specific virus. He likened it to poppy-seed among corn. If the corn contained the seed, poppies would grow; if not, there would be no poppies. So in a syphilitic person the discharge might be free from the syphilitic virus, and then no syphilis would follow; but if the virus did happen to be contained or borne in the discharge, then syphilis would be induced. So Mr. Lane thought that Hunter's inoculation was due to the gonorrhœal discharge being from a person who had previously had syphilis. Further, he thought, and the suggestion is a most important one, that Hunter's comparatively early death from arterial degeneration was largely due to this in every way unfortunate experiment. The now well-known tendency for arterial degeneration to be induced if not set up actually by syphilis renders it exceedingly probable that in Hunter's case such was actually the fact; and had this experiment been performed with the gonorrhœal secretion of a non-syphilized individual, Hunter might have been spared many years longer to labor and investigate, and a most erroneous theory, long accepted, been avoided.

The failure of the sledge-parties of the Arctic expedition, coincidently with a most inadequate, indeed practically useless, supply of lime-juice, is creating much attention. The profession is pushing the inquiry, while the official mind is exercised in parrying their questions and raking up other explanations; but it will probably turn out that for some unaccountable reason the positive instructions about the supply of lime-juice had been disregarded in the furnishing of the sledges, and that scurvy had followed the unfortunate omission.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, NOVEMBER 23, 1876.

The PRESIDENT, DR. H. LENOX HODGE, in the chair.

Report of the Special Committee appointed to examine the extra-uterine pregnancy exhibited by Dr. F. P. Henry on October 12, 1876.

THE committee appointed to examine the "specimens illustrating an extra-uterine pregnancy" presented to the Society at a recent meeting, by Dr. F. P. Henry, submit the following report. The fœtation is of the abdominal variety, the ovule having escaped from the ovary so as to lodge upon the posterior layer of the broad ligament and there develop. The failure of the ovule to enter the Fallopian tube was apparently due to adhesions between the fimbriated extremity and the ovary. The sac was formed from the serous membrane by proliferation of its cells and exudation of fibrin, as in an ordinary adhesive inflammation of this tissue. The vessels developed in the pseudo-membrane have united with those of the broad ligament, from which the placenta was supplied with blood, as can now be readily demonstrated. The right ovary contains a well-marked corpus luteum, situated upon its inferior border and near the uterine extremity of the gland. The ovule, after es-

caping from the ovary, must have been moved to a position external to its point of escape, perhaps from some visceral motion which, owing to the adhesions mentioned, has not been antagonized by the normal serous current whose function it is to direct the ovule towards the fimbriated extremity of the tube. The adhesion may have been sufficient to cause the ovule to deviate from the normal course and yet have permitted the passage of the spermatic fluid, or, as experiments upon the lower animals allow us to conjecture, fecundation may have occurred through the opposite tube.

The fimbriated extremity of the left tube was contracted so as barely to admit a No. 3 (French) catheter.

A section of the broad ligament exhibits numerous large vascular lumina readily admitting an ordinary director, which can be pushed onward through the pedicle of the sac as far as the site of the placenta.

The uterus is enlarged to about the size of the pregnant organ at three months; the cervix is elongated, and the coarsely granular mucous membrane shows decided traces of a decidua. The umbilical cord does not present the usual spiral appearance, which is probably due to the want of vascular injection. This may be brought forward as an additional argument that the fœtus was dead some time before the autopsy.

In order to determine the structure of the sac, sections were made from different points of its circumference and examined microscopically. Those farthest removed from the pedicle were composed of connective tissue solely, while in one cut from the pedicle, about two inches from the ovary, spindle cells were observed which the committee were unable to distinguish from those of organic muscle.

F. P. Henry,
Morris Longstreth,
E. O. Shakespeare,
J. Ewing Mears,
Chas. B. Nancrede.

Report of Dr. Shakespeare on the histological appearances.

The small pieces of the fœtal sac which were referred to me for further minute examination included portions of tissue from the pedicle, portions from a position about an inch removed from the pedicle and to which the placenta had been attached, and portions from that part of the sac most remote from the pedicle. A slice from the uterine wall also accompanied the other pieces.

The tissue from each of the above-named localities was variously treated: some macerated and teased, and some hardened and cut into thin sections. Sections were made horizontal to the surface, as well as sections in several directions perpendicular to that surface. A few sections of each were mounted, unstained, in balsam, for polariscopic examination; others were stained and mounted in glycerin or syrup.

Stained sections of the portions most remote from the pedicle presented the following appearances:

The vertical sections, no matter in what direction made, all showed similar pictures. The most of the ground-substance of these cuts consisted of long, slightly undulating, and nearly parallel bundles of fibrous tissue applied side to side so closely that the interfibrillar spaces, where they existed at all, were narrower and linear in shape. The only cellular appearance that could be discerned was solely confined to these spaces. The spaces were often completely filled with accumulations of cell-like bodies, all seen more or less in profile, and in this view mostly spindle-shaped, although not a few possessed circular outlines. Here and there in a field could be seen linear spaces not so crowded with these bodies. In these the cells were arranged end to end in two separate rows, a small very narrow free space existing between the two rows. On the fibrillar side, these rows of cell-like bodies were closely applied to the fibrous bundles. After the eye became familiar with this arrangement, the same general order could be traced without much difficulty in the previously mentioned more crowded spaces.

The horizontal section showed, in points where the cut was extremely thin, the beforementioned generally parallel course of fibrous bundles.

Here, however, instead of the presence of the cell-like accumulations between each bundle, as before, they were often more prominent in spaces formed by the slight separation of wider fibrous bands, consisting of a number of the smaller bundles placed side by side. Moreover, the cell like bodies were more heterogeneous in form, though they appeared in the vertical section; many distinctly round or oval cells being observed, and the spindle outline being by no means so general.

When a nucleus could be seen it was most frequently round or only slightly oval. No distinctly oval-shaped nucleus could be discovered, nor any oval one which decidedly approached the former shape.

Thicker portions of these horizontal sections revealed an apparent lamellar arrangement of the fibrous bundles, with the direction of fibres in adjoining lamellæ at right angles to each other. The majority of the tissue was, in accordance with the suggestion, easily separated into thin plates. The appearance of the vertical section also supported the conclusion as to the lamellar arrangement. Large-sized capillary vessels, whose walls were in a state of irritation, were observed to course occasionally between the different lamellæ. The unstained sections, when placed between crossed Nichols prisms, were found to transmit light in the following portions. The fibrous bundles became luminous where their axes formed an angle with the axes of the prisms; the greatest intensity being reached when that angle became

equal to 45°. In no position could the cells in the intercellular spaces be made to polarize.

The conclusion arrived at respecting the nature of this portion of the sac, and strengthened by examination of teased portions, was that it presented the appearance of that form of irritated connective tissue of which the sclera may be considered a type, and that probably but few, if any, muscle-cells were present in it.

The same general description pretty well expresses the appearances found in the tissue of the sac one inch from the pedicle. The vessels were found in the same position relative to the lamellæ, but, instead of being capillary, arteries and veins of considerable size were numerous. Besides the cells previously described, there were many large spindle-cells which it was impossible to say were not muscular. These were sometimes arranged in small bundles, but were most frequently isolated; their nuclei, however, when seen were oval. The sections from the pedicle exhibited in larger numbers the spindle-cells last described, and showed less of the fibrous and more of the vascular structure than did the portions previously mentioned.

The conclusion reached from these examinations may be stated as follows: that the great mass of the sac is to be considered as fibrous connective tissue; that in the pedicle and in that portion of the sac an inch removed from the former were also to be found muscle-cells. E. O. SHAKESPEARE.

Patho-anatomy of the nervous system; a verbal communication by Dr. HARRISON ALLEN. Published in the *Medical Times* for December 9, 1876.

Dr. HODGE remarked that Dr. Allen had not made any allusion to the communication of the fourth ventricle with the arachnoid space. He asked whether this would not relieve any tendency to bulging which might exist in the membrane closing the latter ventricle.

Dr. ALLEN replied that he had not been unmindful of this communication. It is a question to what degree the passage is enabled to carry off the cerebral fluid. If it were at all times competent, no retention could occur. It is probable that long-sustained downward pressure from the region of the occipital lobe might close the passage between the third and fourth ventricles, or, as Luschka has suggested, the boundaries of the opening between the anterior border of the tentorium and the base of the skull might, under favoring conditions, exert pressure upon the return flow of blood from the middle of the cerebrum, and thereby induce dropsical effusions in the ventricles in the same manner as pressure on the portal vein causes abdominal dropsy.

Dr. F. P. HENRY desired to know of Dr. Allen whether the numerous cases of paralysis of the body on the same side as the brain-lesion could be explained by any known anatomical facts. More than a hundred such cases have been collected by Brown-Séquard, who explains them by the theory of inhibitory action, according to which the irritation may paralyze either a contiguous or a distant centre, the parts in direct nervous continuity with the lesion not being necessarily affected. According to this view, a lesion may in one case produce paralysis on the same side; in another, a precisely similar lesion in all respects may produce paralysis on the opposite side. He would also inquire what preliminary process the brain is subjected to in order to render these dissections possible.

Dr. ALLEN said in reply to the first question, that it has been shown by Benedict that the conditions of transmission are often influenced by the exciting cause of the part in communication with it. In irritation of the cerebellum sometimes there are no evidences of irritation, while in other cases the same cause will produce paralysis.

Sometimes we can explain these phenomena by anatomical structure, at others not: the relation between the quadrigeminal mass and the cerebellum can be explained by the peripheral tract which unites them. We can see how we can influence the whole motor tract which underlies the quadrigeminal mass.

Whenever we do not have all the symptoms accounted for by the site of the lesion, we must study all the correlated conditions of the part.

In answer to Dr. Henry's second question, as to the methods of preparation of the brain, he could only say that they are very intricate. They are those of Meynert, and the only knowledge he had of them was derived from a recent verbal communication before the Boston Society for Medical Improvement, which gave the details of the process. The essential parts consist in hardening by alcohol and chromic acid.

Dr. C. B. NANCREDE asked Dr. Allen whether he understood him to say that Mr. Callender had stated that a lesion in one situation excited morbid action in another, and this in a third, by means of the decussating fibres.

Dr. ALLEN replied that this was true, but that it was not Callender who had made the statement, but Benedict.

Dr. NANCREDE thought that, this being the case,—viz., that a lesion of a portion of the brain did not necessarily affect the parts supplied by nerves from it, but did affect parts having another nerve-centre,—the explanation was very easy. For instance, take an abscess in the *left* side of the brain; this does not produce paralysis in the parts supplied by nerves from the centre implicated, possibly on account of its very slow growth; but sets up a morbid action, say in the corpora quadrigemina. This centre responds to the irritation, but, instead of producing some affection of vision, by commissural fibres it sets up an inhibitory action in the corpus striatum of the right side. Then, of course, on account of the

decussation of the anterior pyramids of the medulla oblongata, the paralysis is on the *left* side, or that of the real lesion.

From what we know of the *macroscopic* commissures of the brain in most cases, such explanations will prove easy; but when the *microscopic* ones are thoroughly understood there will probably be no difficulty in any case. By referring to what we know of so-called reflex paralysis, the explanation is rendered still more easy. In such cases we know that a diseased condition of the bladder or of some other organ will often set up an inhibitory influence in the spinal cord, which will result in paralysis of various parts. Whether this influence be vascular or not he does not pretend to determine. Now, in place of the abscess in the supposed case, substitute a diseased bladder, and we have the whole pathology of these cases of brain-lesion with paralysis in the side of lesion. He does not see, however, the necessity of the intermediate centre, as in many parts of the brain the impression can be conveyed without necessarily passing to any such ganglionic mass.

Obstruction of the intestines, due to contraction caused by great accumulation of fat around the descending colon; peritonitis.

Dr. H. LENOX HODGE reported the results of a post-mortem examination made upon a woman who died from obstruction of the intestines and peritonitis.

She was a mulatto, about 58 years of age. Her general health had been good, although she was exceedingly fat. About three weeks before her death she had fallen heavily from a chair, striking her abdomen. During the last two weeks she had obstinate constipation, and bilious and stercoraceous vomiting. The abdomen was tympanitic, but not greatly distended. Injections given with Davidson's syringe came away quickly, and even when given in large quantities returned perfectly clear, without being discolored with fæces. A large tube could be passed high up the rectum, and when the injection was thrown up this tube it brought away small quantities of fecal matter, and the fluid came away discolored.

The post-mortem examination was made thirty-six hours after death.

The abdominal walls were very thick and fat.

The omentum was exceedingly thick, being loaded with fat.

There was extensive peritonitis over the region of the small and large intestines. There were bands of lymph binding together the folds of the small intestines. The most severe inflammation was at the beginning of the jejunum. The coats of the intestine were there of a chocolate color.

The ascending and transverse colon were smaller than usual, but presented the normal sacculated appearance. Their epiploic appendages were, however, enormous. The descending colon was apparently buried in the fat of the epiploic appendages. It could not be distinguished except by section. A section was made just above the sigmoid flexure; the coats were found very thin, and the calibre of the tube was so small as scarcely to admit the forefinger. Below this point the intestine was empty; above it, a hard mass of fæces about the size of a walnut filled the colon, and could only be pressed out by force. The muscular power of the intestines could not have moved this mass any further in the narrow canal. The injections had washed out the bowel below, but had failed to make any impression on this mass.

The rectum was also small, but everywhere could receive the forefinger.

The walls of the uterus were filled with subserous and sub-mucous fibrous tumors. It occupied a large portion of the pelvis, but there was room enough for the bladder and rectum without any pressure being made upon them.

The gall-bladder was filled with gall-stones.

Dr. ALLEN asked Dr. Hodge whether the fat was more abundant on the descending colon, which is more at rest than the ascending gut, and therefore more disposed to the accumulation of fat.

Dr. HODGE replied that the fat was chiefly on the descending colon and a part of the transverse gut; that the ascending colon was comparatively normal.

REVIEWS AND BOOK NOTICES.

MODERN THERAPEUTICS. By GEORGE H. NAPHEYS. Fourth edition, rewritten and enlarged. Philadelphia, D. G. Brinton, 115 South Seventh Street.

The present book has been so long before the public that it seems almost superfluous to state that in it diseases are arranged as headings, under each of which are given formulæ and short sketches of treatment as commended by various physicians, ranging in authority from the highest to the lowest rank. With this in his pocket, all the doctor has to do is to name the disease of his patient, open his book at the proper page, shut his eyes, put his finger on the page—and take the prescription it hits. This prescription may be of one character, or it may be of precisely the opposite, for, seemingly without rhyme or reason, remedies the most antagonistic in some cases lie side by side. It will be seen that the book is especially fit for a "family practice," enabling the materfamilias to rival her homœopathic sister across the street in amateur trifling with life.

The work has had a large sale, but we trust, for the credit of the American profession, that it is the "family practice" side of it which has secured success, and that it is the laity who

have so freely purchased it. The apotheosis of empiricism, the glorification and incarnation of routinism, it must, however, secure a certain measure of success among the less educated members of the profession.

We do not deny a certain amount of usefulness in such a work as the present, but it does seem that in so far as the methods of the older formulary are departed from, the tendencies of this class of works become most dangerous.

Whatever may be thought in regard to the scope of the work, there can be no difference of opinion as to the judgment which ought to be pronounced upon an editor who misquotes or misrepresents those whose views he undertakes to set forth. As references are exceptionally given, it would be preposterous to expect a reviewer to go through the book, then hunt up the papers and volumes from which it has been drawn, and finally compare the original with the portrait.

We read on p. 401, in brackets, and probably added by the editor, "Prof. H. C. Wood, of Philadelphia, questions the great susceptibility of infants to opium. He has used that drug with great freedom in infantile therapeutics, and without injury." Turning to H. C. Wood's Therapeutics, second edition, p. 216, we read, "Children always bear opium very badly, and to them only the weaker preparations should be given."

How far we are justified in considering this a sample we do not pretend to say. The matter is, however, one of the gravest importance, and the old proverb says, "*Ex uno omnes disce.*"

PUBLIC HEALTH REPORTS AND PAPERS PRESENTED AT THE MEETINGS OF THE AMERICAN HEALTH ASSOCIATION IN THE YEARS 1874-75. New York, Hurd & Houghton, 1876.

This is a large, handsome volume of five hundred and fifty pages, and very varied contents, as set forth in between forty and fifty papers. The subjects of the memoirs range very widely in the field of hygiene, and are many of great practical importance, but we fail to find among them a single essay based upon original and extensive experimentation: as everywhere else in American medicine, the applications of science rather than the science itself receive attention. As a practical book of this character the volume is one which needs no apology; and when we consider the almost complete neglect of hygiene by our government, and that a career as a hygienist is almost impossible in this country, the work here accomplished is astounding. It is certainly remarkable that, with no possible individual interests to serve, and in the face of so much indifference if not of actual opposition, our American physicians have accomplished so much. To the promoters and supporters of the American Health Association the country owes a debt of gratitude which will perhaps never be recognized, although we doubt not in the future years will come to these individuals the pleasurable consciousness of successful effort and of a great benevolence accomplished.

REPORT OF THE SURGEON-GENERAL'S OFFICE.

The annual report of the Surgeon-General for 1876 contains the usual records of casualties and results, of expenses incurred, etc., etc., but not much of general interest which has not already been laid before our readers. We learn from it that the number of artificial limbs and apparatus allowed during the year, in kind, was 545, and by commutation 3350, showing that the great popularity of commutation prevails in regard to limbs as well as quarters, rations, forage, etc. To the national library were added during the year two thousand volumes. The photographers appear to have had a successful year, adding eight hundred and ten negatives to their store. We are very glad to see that the Surgeon-General "strongly recommends" Congress to authorize the printing of the subject catalogue.

GLEANINGS FROM EXCHANGES.

DIAGNOSIS OF INTESTINAL OBSTRUCTION (*British Medical Journal*, Nov. 18, 1876).—In a communication to the Medico-Chirurgical Society of Glasgow, Professor G. H. B. Macleod classes the causes of intestinal obstruction as follows: those existing within the bowel itself; those existing in the wall of the gut; those seated in surrounding parts. Among the first are included—(a) foreign bodies which have been swallowed, have formed within the bowel, or been inserted by the anus; (b) intussusception or invagination, in which one portion of the bowel passes within another; (c) incarceration of the bowel in old irreducible herniary protrusions; (d) growths, simple or malignant, protruding into the intestinal canal. Among causes seated in the wall of the gut may be mentioned—(a) spasm, such as may arise in enteritis and lead-colic; (b) paralysis of the bowel, as in violent catarrhal inflammations and after herniotomy; (c) stricture due to cicatrization after ulceration or to malignant disease of the bowel; (d) volvulus or twist in the bowel; (e) hypertrophy of one of the valvulæ conniventes. Among causes lying outside of the bowel may be mentioned—(a) adhesions of the bowel to some surrounding part, or to another coil of bowel; (b) bands or diverticula constricting the bowel; (c) tears or apertures in the omentum, mesentery, or peritoneum, enclosing a coil of bowel; (d) internal hernia, as diaphragmatic, obturator, ischiatic, into the foramen of Winslow, etc.; (e) enlargements or displacements of the uterus, ovary, liver, pancreas, spleen, kidney, etc.; (f) tumors, mesenteric, ovarian, or other.

Abscesses connected with dead bone or that of perityphlitis. The following occasion urgent early effects: invagination, spasm, volvulus, loops, and internal hernia, and in many cases adhesions and bands; on the other hand, the signs of obstruction come on slowly when it is occasioned by foreign bodies, incarceration, growths within or without the canal, paralysis, stricture, or the pressure of neighboring tumors or organs.

The signs by which intestinal obstruction makes itself known are—(1) constipation (which, in connection with stercoraceous vomiting, is one of the most characteristic signs of obstruction of the bowel); (2) pain, ranging from a feeling of weight to violent suffering; (3) vomiting, occurring early if the obstruction is high, late if it is low down the bowel,—at first bilious, then *feculent;* even when the obstruction is in the small intestine, the ejecta come to have the smell of fæces; (4) swelling, confined to a portion of the abdomen or affecting the whole cavity,—an important aid often in fixing upon the affected part; (5) movements of the bowel accompanied by violent gurgling are observed before the gut becomes paralyzed by distention in the obstructions of the lower gut; (6) hiccough is frequently a distressing condition; in obstructions high up it may appear very violent; (7) in sudden acute attacks involving the upper gut, the secretion of urine may be decreased or even suppressed, but in chronic obstruction low down in the canal a reverse effect may be produced. To these symptoms must be added the facies Hippocratica, dyspnœa, peritonitis, etc. Fatal obstruction rarely occurs from foreign bodies swallowed, and the symptoms which their presence occasion are very uncertain and inconstant. In obstruction from gall-stones, the history of jaundice, sudden attacks of pain, etc., will help in making the diagnosis, while rectal examination with the finger, bougie, or water injection will ordinarily determine the presence of hardened fæces. Invagination, the cause of nearly one-half the cases of obstruction, and particularly common among infants and young children, is recognized by the age of the patient, previous history of some irritability of the bowels, frequent desire to go to stool, with straining when there; the discharge of blood; much restlessness, with pain in paroxysms; thirst, and vomiting. A sausage-like tumor is often observed lying across the belly. Stricture of the bowel gives a history of antecedent inflammation, as ulceration or intussusception. Twists or strangulation by rotation of the bowel produce effects similar to internal hernia.

Professor Macleod gives also distinguishing marks for recognizing obstruction from the various less frequent causes, and adds a number of other cases illustrative of the various heads.

IDIOPATHIC GLOSSITIS.—Several cases of this affection have recently been reported in the journals, the general symptoms of which have been in most respects similar. In the *Medical Press and Circular* for November 22, 1876, Mr. James P. Byrne reports a case in which abscess of the root of the tongue occurred as a complication. The patient, a married woman of somewhat impaired constitution, presented a swelling of the tongue, not excessive, which had appeared several days previously. The throat, which was very hard and œdematous, was poulticed externally, while hot water was held in the mouth as long as it could be borne. The tongue, however, continued to swell rapidly, operative interference became necessary, and two days later a couple of *long* and deep parallel incisions were made on either side of the raphé as far back as possible. Immediate but only temporary relief was experienced; within the next few days the tongue once more became alarmingly swollen, and a peculiar hard ridge could be observed on the left side of the raphé, which gave, however, no sense of fluctuation. Suspecting a deep-seated abscess, a Syme's knife was passed far back and drawn forward, with the effect of liberating a quantity of fetid pus and relieving the patient permanently.

EASY METHOD OF REMOVING ADHERENT MUCUS FROM THE OS UTERI.—Professor Pajot recommends the following as the easiest method of removing the viscid, tenacious mucus, characteristic of certain forms of catarrh, from the uterine orifice. Dip a ball of charpie into the yolk of a fresh, raw egg, apply it for a few seconds to the mucus, and then inject one or two syringefuls of water into the speculum, continuing meanwhile to apply the charpie gently to the cervix. Now let the water flow out, and dry the cervix, when it will be found to be perfectly cleansed of all secretion.

TO PREVENT the condensation of vapor on laryngeal mirrors, it is only necessary to pass a cloth saturated with glycerin over the surface of the glass. The vapor contained in the expired air is dissolved in the glycerin, and the mirror remains clear.—*Lyon Médical.*

A NEW MODE OF GENERATING SULPHUROUS ACID FOR USE AS A DISINFECTANT' (*Lancet*, November 18, 1876).—Mr. Thomas W. Keates suggests the use of bisulphide of carbon as a material from which to evolve sulphurous acid. This substance is, as is known, quite volatile and inflammable, so that it will burn like spirits of wine. It contains a large proportion (84 per cent.) of sulphur, and when mixed with kerosene and burned in an ordinary lamp will evolve such an amount of sulphurous acid vapor as to disinfect a moderate apartment very rapidly. The method of employing the lamp is described by Mr. Keates, who has devised some peculiar sort of lamp for using the bisulphide of carbon more advantageously. An ordinary lamp is all that is necessary. It should be said that although

the smell of bisulphide of carbon when impure is most nauseating, yet a pure article is now manufactured, having little or no odor.

ITINERANT PILE-SURGEONS AND THEIR SECRET.—Dr. E. Andrews relates, in the Chicago *Medical Journal and Examiner*, October, 1876, that the travelling "pile-doctors" use the following preparation hypodermically:

℞ Crystallized carbolic acid, ʒiii;
Pure oil (some fixed oil), fʒi.
Mix.

Some use equal parts of the acid and oil; others substitute glycerin for the oil; and one, at least, has tried a preparation of ergot. When the piles are internal and not readily brought down, a Sims speculum is used to uncover them. The operator usually takes but one pile at a time, always selecting the uppermost first, and injects into its interior from four to six drops of the solution. This causes the tumor to turn white, and probably coagulates the blood in its vessels, and results in its shrinking away without any inflammation severe enough to prevent the patient attending to ordinary business. When necessary, the operation is repeated. Strong solutions of carbolic acid produce an anæsthetic effect, so the claim that the method is "painless" is usually considered reasonable, although great irritation and inflammation follow in some cases. The absolute safety of the plan is not yet demonstrated. Dr. Andrews thinks that perhaps cases of embolism of some branch of the portal vein, and consequent serious hepatic complications, may possibly result.

EXPECTANT TREATMENT OF CHOREA (*Lancet*, November 28, 1876).—Drs. Gray and Tuckwell have added, to a first series of cases of chorea published five years ago, a second series, bringing the number up to a total of thirty-eight in which the expectant plan was followed. The patients were given the best diet, and took in addition nothing more than an occasional dose of caraway water or sugared water by way of placebo.

The average duration of the first series of cases was eleven weeks, of the second series nine weeks, a result which compares favorably with the results of cases treated by arsenic (ten to eleven weeks), or of other forms of treatment as tabulated by Hillier and Sée, "about ten weeks," according to the first writer, "sixty-nine days" according to the latter. "An isolated ward; a good nurse; a large crib, well padded round and walled in with pillows, plenty of nutritious food, without stimulants, —on these," say Drs. Gray and Tuckwell, "we shall feel inclined to rely in the treatment of severe chorea, till we obtain more conclusive evidence than has yet been adduced that the disease can in the slightest degree be favorably influenced by any medicine" as yet discovered.

MISCELLANY.

TESTS FOR BILE-PIGMENT.—At a recent meeting of the Irish College of Physicians, Dr. W. G. Smith showed that the principle on which all the bile-tests depended was the conversion of bilirubin into biliverdin by oxidation,—a green coloration being produced by the reactions. Although the nitric acid test was depended upon in delicate physiological investigations, it was desirable to have at command some supplementary tests which were easy of execution and free from fallacy. Four test-liquids seemed to answer to these indications, viz., tincture of iodine, ferric chloride, peroxide of hydrogen, and the acetic or phosphoric solution of peroxide of lead. The two latter liquids possessed the advantage of being colorless; and the phospho-plumbic solution especially promised well as a delicate reagent. Peroxide of lead had been utilized in experiments on bile (Maly); but peroxide of hydrogen and ferric chloride had not, so far as Dr. Smith knew, been used by other experimenters. With a fresh supply of material, he purposed to study more closely the action of the iron, lead, and hydrogen peroxide; but, as the clinical experiments had been chiefly conducted with the iodine test, he, in conclusion, mentioned the reasons which seemed to him to recommend tincture of iodine to the notice of those interested in such matters. 1. A single reagent, always easy to obtain, is alone necessary; 2. The test-liquid is not corrosive; 3. A single definite color is produced with the bile-pigment; 4. The color is sufficiently persistent; 5. From the less powerful chemical energy of the reagent, as compared with that of nitric acid, there is a diminished liability to error; 6. No other pigment than bile will yield the characteristic green color; 7. The test fully equals in delicacy, possibly surpasses, the nitric acid test. The test is applied by putting about a drachm of urine in a glass test-tube and allowing one or two drops of tincture of iodine to trickle down the side of the tube so as gently to touch the surface of the urine. A stratum of bright emerald-green coloration forms at the junction of the fluids. Dr. Emerson Reynolds concurred with Dr. Smith as to the doubtful value of the nitric acid test. He had come to the conclusion that any oxidizing agent would suffice for the conversion of the bilirubin, or brownish coloring-matter, into biliverdin, or greenish coloring-matter, as the change seemed to consist in the addition of a molecule of water and an atom of oxygen to the brown-colored substance. Iodine, from its deep color, he rather objected to. Ferric chloride was reduced by too many other substances to be of value. The phosphoric solution of peroxide of lead acted with extreme facility. Ozonized ether also acted well. Dr. Finny and Dr. Foot had both experience of the successful use of the iodine test. Dr. Foot further suggested that the

test might aid in distinguishing the etiology of hæmatogenous and of hepatogenous jaundice.

DRY PREPARATIONS.—For preparing rapidly bones and ligaments for museum purposes, Dr. L. Frederick (*Bulletin de l'Acad. Royale de Belgique*, June, 1876) recommends that after the soft parts have been taken away, except the ligaments, the preparation be washed in water, dehydrated by alcohol, and then plunged into essence of turpentine. After two or three days' maceration in this fluid, the skeleton is placed in the position in which it is designed to keep it, and dried in the air. In drying, the bones and ligaments become beautifully white, and the whiteness increases as time passes. The same process gives less satisfactory results for muscles. For a parenchymatous organ, on removing it from the turpentine bath, Dr. Frederick plunges it into melted wax or paraffin during half an hour to two hours, till the bubbles of turpentine have ceased to pass off. When withdrawn and cooled, the piece resembles a wax model, but is far superior in its minor details: the color of the organ persists.—*British Medical Journal.*

A HOMŒOPATHIC AUDIENCE.—"A Chair of Homœopathy" was inaugurated in the University of Buda-Pest in October, 1875. Six persons, according to the *Wiener Allgemeine Med. Zeitung*, constituted the audience; but before the course was concluded they had all deserted the benches.—*British Med. Jour.*

SAWDUST BRANDY.—An American journal of high moral principles is sorry to learn that a German chemist has succeeded in making a first-rate brandy out of sawdust. "We are friends to the temperance movement," says the editor, "and want it to succeed; but what chance will it have when a man can take a rip-saw and go out and get drunk with a fence-rail? What is the use of a prohibitory liquor-law if a man is able to make brandy smashes out of the shingles on his roof, or if he can get the delirium tremens by drinking the legs of his kitchen chairs? You may shut an inebriate out of a gin-shop and keep him away from taverns; but if he can become uproarious on boiled sawdust and desiccated window-sills, any effort at reform must necessarily be a failure. It will be wise, therefore, if the temperance societies will butcher the German chemist before he goes any further. His recipe ought not to be made public. He should be stuffed with distilled board-yards until he perishes with *mania a potu*."

ADMINISTRATION OF RAW BEEF.—The *Journ. de Pharm.* commends the following plan: Beef should always be rasped, not chopped. The rasping is done with a sharp knife-blade,—the sharper the better. The piece of meat should be pretty thick, and of lozenge shape; the rasping can be done on all the facings, in the natural direction of the muscular fibre. The piece should rest, held by one end, on a resistant and slightly inclined plane. The meat may be given in the form of a pill or bolus, which is rolled in powdered sugar or crumb of bread. If it cannot be taken thus, it may be given under the mask of bouillon, which should be cold. One of the best methods is to prepare a thin porridge of tapioca; let it cool till it cannot cook the meat in the least. Then the meat, finely rasped, is introduced into a small quantity of cold soup till the mixture is complete. This mixture has the aspect and consistence of a fine soup of tomatoes. Next the tapioca porridge is gradually poured on this soup, the mixture being constantly stirred. Thus a homogeneous porridge is obtained, in which the meat is so well concealed that no one would detect it unless previously advised of its presence.

DEATH OF VON BAER.—The German journals report the death of the well-known naturalist, Karl Ernst von Baer, at Dorpat, on November 28.

MR. WILLIAM HARVEY, the well-known aurist, and author of the "Banting system," has died from the exhausting effects of carbuncle.

NOTES AND QUERIES.

HALL OF THE NORTHERN MEDICAL ASSOCIATION,
608 FAIRMOUNT AVE., PHILADELPHIA, Jan. 13, 1877.

TO THE EDITOR OF THE MEDICAL TIMES.

Dear Sir,—At the Annual meeting of this Association, held on the 12th inst., the following officers were elected for 1877: for President, Dr. S. R. Knight; Vice-President, Dr. L. B. Hall; Treasurer, Dr. E. I. Santee; Secretary, Dr. Charles Carter; Corresponding Secretary, Dr. E. R Stone; Reporting Secretaries, Dr. S. D. Risley and Dr. E. E. Montgomery; Counsellors, Dr. N. L. Hatfield, Dr. J. Henry Smaltz, Dr. Levi Curtis, Dr. W. M. Welch, and Dr. Charles Carter.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 31, 1876, TO JANUARY 13, 1877, INCLUSIVE.

BROWN, J. R., SURGEON.—To report in person to the Commanding General, Military Division of the Atlantic, for temporary duty in the Medical Director's office of that Division. S. O. 266, A.G.O., December 28, 1876.

BILL, J. H., SURGEON.—To report in person to the Commanding Officer, Department of the South, for assignment to duty. S. O. 266, A.G.O., 1876.

FRYER, B. E., SURGEON.—To report in person to the Commanding General, Department of the Missouri, for assignment to duty. S. O. 266, A.G.O., 1876.

BROWN, H. E., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort Wadsworth, N. Y. H. S. O. 5, Military Division of the Atlantic, January 6, 1877.

BENTLEY, E., ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 1, A.G.O., January 3, 1877.

CRAMPTON, L. W., ASSISTANT-SURGEON.—Assigned to duty with Second Battalion Thirteenth Infantry, New Orleans, Louisiana. S. O. 258, Department of the Gulf, December 30, 1876.

WRIGHT, J. J. B., COLONEL AND SURGEON.—Retired from active service, to date December 31, 1876, by direction of the President, in conformity with Sec. 1244, Revised Statutes. S. O. 2, A.G.O., January 5, and S. O. 6, A. G.O., January 10, 1877.

MILLER, GEO. MCC., ASSISTANT-SURGEON.—His resignation accepted by the President, to take effect January 1, 1877. S. O. 266, A.G.O., 1876.

By direction of the Secretary of War, the Army Medical Board convened in New York City by S. O. 149, A.G.O., July 10, 1874, is dissolved. S. O. 266, A.G.O., 1876.